



TENNESSEE VALLEY AUTHORITY

Pumped Storage Hydro Programmatic Environmental Impact Statement

AGENCY: Tennessee Valley Authority.

ACTION: Notice of intent.

SUMMARY: The Tennessee Valley Authority (TVA) is conducting a study to evaluate increasing pumped storage hydropower (PSH) capacity within its power service area. To meet its obligations under the National Environmental Policy Act (NEPA), TVA is preparing a Programmatic Environmental Impact Statement (PEIS) to evaluate potential new PSH facilities at two locations in Jackson County, Alabama and expansion of the existing Raccoon Mountain PSH Plant in Marion County, Tennessee. Based on the findings of the PEIS, TVA may potentially select one or more sites as the need for long-duration energy storage increases. The PEIS will consider potential environmental and economic impacts from the construction and operation at each site.

DATES: To ensure consideration, comments on the scope and environmental issues must be postmarked, emailed, or submitted online no later than July 5, 2023. To facilitate the scoping process, TVA will hold a virtual public scoping meeting; see <https://www.tva.gov/nepa> for more information on the meeting.

ADDRESSES: Written comments should be sent to Elizabeth Smith, NEPA Compliance Specialist, 400 West Summit Hill Dr., WT 11D, Knoxville, TN 37902-1499. Comments may also be submitted online at: <https://www.tva.gov/nepa> or by email at pumpedstorageNEPA@tva.gov.

FOR FURTHER INFORMATION CONTACT: For general information about the NEPA process and/or general project information, please email pumpedstorageNEPA@tva.gov, or NEPA Specialist, Elizabeth Smith, at (865) 632-3053.

SUPPLEMENTARY INFORMATION: This notice is provided in accordance with the Council on Environmental Quality's Regulations (40 CFR parts 1500 to 1508) and TVA's procedures for implementing the NEPA. TVA is an agency and instrumentality of the United States, established by an act of Congress in 1933, to foster the social and economic welfare of the people of the Tennessee Valley region and to promote the proper use and conservation of the region's natural resources. One component of this mission is the generation, transmission, and sale of reliable and affordable electric energy.

The analyses in a programmatic NEPA review are valuable in setting out the broad view of environmental impacts and benefits for a proposed decision such as a rulemaking, or establishing a policy, program, or plan. That programmatic NEPA review can then be relied upon when agencies make decisions based on the programmatic EIS, as well as decisions based on a subsequent (also known as tiered) NEPA review.

Background

PSH is a type of hydroelectric energy storage that consists of two water reservoirs at different elevations in which water can be pumped to the higher elevation reservoir during periods in which energy storage is needed and then can be released during periods when energy is needed on the electrical grid. PSH is utilized for long term storage to provide for reserves on the grid, use excess energy to store water in the higher reservoir when demand drops below the base load generation, and to support intermittent generation for renewables such as wind and solar.

TVA is planning a substantial decarbonization effort and aspires to be carbon neutral by 2050. As part of these efforts, long-duration storage (8 to 12 hours) will be needed to balance the daily energy cycle. This long-duration storage will enable additional generation from solar, new nuclear, and carbon capture technologies.

Long duration energy storage, like pumped storage, supports nuclear generation and carbon capture technologies by assisting with load balancing and allowing these

technologies to run nearly full time, which is important as these technologies are generally not conducive to following the demand curve and work best when running fully loaded. PSH is a reliable and proven technology. The addition of pumped storage hydro facilities could also help TVA maintain grid stability and reliability in the future grid with less dispatchable generation and greater minute-by-minute variability due to fluctuations in output from renewables such as solar and wind.

Project Purpose and Need

TVA is planning a substantial decarbonization effort with aspirations of being carbon neutral by 2050. To meet these goals, long-duration storage (8 to 12 hours) will be needed to balance the daily energy cycle. This long-duration storage will enable additional generation from solar, new nuclear, and carbon capture technologies.

Long duration energy storage, like pumped storage, supports nuclear generation and carbon capture technologies by assisting with load balancing and allowing these technologies to run nearly full time, which is important as these technologies are generally not conducive to following the demand curve and work best when running fully loaded. PSH is a reliable and proven technology. The addition of pumped storage hydro facilities could also help TVA maintain grid stability and reliability in the future grid with less dispatchable generation and greater minute-by-minute variability due to fluctuations in output from renewables such as solar and wind.

The purpose of this PEIS is to evaluate the potential for pumped storage facilities in two areas in Jackson County, Alabama, and an expansion of the existing facility at Raccoon Mountain and to consider potential environmental and economic impacts from the construction and operation of pumped storage facilities at each site. After the PEIS, one or more sites will be further evaluated, and transmission line siting performed. The impacts of that evaluation and transmission options for the preferred site(s) will be considered in a future supplement to this PEIS.

Preliminary Proposed Action and Alternatives

TVA has initially identified four alternatives for evaluation in the PEIS associated with the proposed pumped storage hydro facilities. These include a No Action Alternative and three Action Alternatives. Under the No Action Alternative, TVA will evaluate and consider the impact of not including additional PSH in TVA's energy storage fleet. TVA will evaluate and consider each of the Action Alternatives to determine which site(s) are best suited for pumped storage. The Action Alternatives will include the expansion of the existing PSH facility at Raccoon Mountain, constructing a new facility near Pisgah, Alabama (Rorex Creek), and constructing a new facility near Fabius, Alabama (Widows Creek). Both new facilities would be located within Jackson County, Alabama.

The description and analysis of these alternatives in the PEIS will inform decision makers, other agencies, and the public about the potential for environmental impacts associated with the proposed PSH facilities. TVA solicits comment on whether there are other alternatives that should be assessed in the PEIS. TVA also requests information and analyses that may be relevant to the project.

Anticipated Environmental Impacts

Public scoping is integral to the process for implementing NEPA and ensures that (1) issues are identified early and properly studied, (2) issues of little significance do not consume substantial time and effort, and (3) the analysis of identified issues is thorough and balanced. This PEIS will identify the purpose and need of the Action Alternatives and will contain descriptions of the existing environmental and socioeconomic resources within the area that could be affected by the proposed project. Evaluation of potential environmental impacts to these resources will include, but not be limited to, water resources, biological resources, cultural resources, natural areas and recreation, navigation, utilities, recreation, geology and groundwater, air quality and climate change, greenhouse gas emissions, land use and prime farmland, noise, public health and safety,

socioeconomics and environmental justice, solid and hazardous waste and material, transportation, and visual resources. The PEIS will analyze measures that would avoid, minimize, or mitigate environmental effects.

The final range of issues to be addressed in the environmental review will be determined, in part, from scoping comments received. TVA is particularly interested in public input on other reasonable alternatives that should be considered in the PEIS. The preliminary identification of reasonable alternatives and environmental issues in this notice is not meant to be exhaustive or final.

Anticipated Permits and Other Authorizations

TVA anticipates consulting with the required authorities including, but not limited to: the Endangered Species Act; Bald and Golden Eagle Protection Act; Rare Species Protection and Conservation Act; National Historic Preservation Act; Clean Air Act; and Federal Clean Water Act.

TVA anticipates seeking required permits or authorizations as appropriate, from the following governmental entities: US Army Corps of Engineers; US Environmental Protection Agency; Alabama Department of Environment and Conservation; Tennessee Department of Environment and Conservation; US Fish and Wildlife Service; Alabama State Historic Preservation Officer; Tennessee State Historic Preservation Officer; and Tribal Historic Preservation Officers. This is not an exhaustive list, other permits or authorizations may be sought as required or appropriate.

Public Participation and Scoping Process

The public is invited to submit comments on the scope of the PEIS no later than the date identified in the **DATES** section of this notice. Federal, state, and local agencies and Native American Tribes are also invited to provide comments. Information about this project is available on the TVA web page at <https://www.tva.gov/nepa>, including a link to an online public comment page.

SEIS Preparation and Schedule

Any comments received, including names and addresses, will become part of the administrative record and will be available for public inspection. After consideration of comments received during the scoping period, TVA will develop a scoping document that will summarize public and agency comments that were received and identify the schedule for completing the PEIS process.

Following analysis of the resources and issues, TVA will prepare a draft PEIS for public review and comment tentatively scheduled for late 2024/early 2025; the final PEIS and decision is tentatively scheduled for 2025. In finalizing the PEIS and in making its final decision, TVA will consider the comments that it receives on the draft PEIS. A final determination on proceeding with the preferred alternative will be documented in a Record of Decision.

Authority: 40 CFR 1501.9.

Susan Jacks,

General Manager, Environmental Resource Compliance.

[FR Doc. 2023-10653 Filed: 5/18/2023 8:45 am; Publication Date: 5/19/2023]